

## Product datasheet for **RG204485**

### Adenosine Receptor A2a (ADORA2A) (NM\_000675) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Adenosine Receptor A2a (ADORA2A) (NM_000675) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Adenosine Receptor A2a
Synonyms:	A2aR; ADORA2; RDC8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG204485 representing NM_000675 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCCATCATGGGCTCCTCGGTGTACATCACGGTGGAGCTGGCCATTGCTGTGCTGGCCATCCTGGGCA  
ATGTGCTGGTGTGCTGGGCCGTGGCTCAACAGCAACCTGCAGAACGTCACCAACTACTTTGTGGTGTG  
ACTGGCGCGGCCGACATCGCAGTGGGTGTGCTCGCCATCCCCTTTGCCATCACCATCAGCACCGGGTTC  
TGGCTGCTGCCACGGCTGCCTCTTCATTGCCTGCTTCGTCCTGGTCTCACGCAGAGCTCCATCTTCA  
GTCTCCTGGCCATCGCCATTGACCGCTACATTGCCATCCGCATCCCGCTCCGGTACAATGGCTTGGTGAC  
CGGCACGAGGGCTAAGGGCATCATTGCCATCTGCTGGGTGCTGCTGTTGCCATCGGCCTGACTCCCATG  
CTAGGTTGGAACAACGCGGTACGCAAAAGGAGGGCAAGAACCACTCCCAGGGCTGCGGGGAGGGCCAAG  
TGGCCTGTCTCTTTGAGGATGTGGTCCCATGAACTACATGGTGTACTTCAACTCTTTGCTGTGTGCT  
GGTGCCCTGTGCTCATGCTGGGTGTCTATTTGCGGATCTTCTGGCGGCGCGACGAGCTGAAGCAG  
ATGGAGAGCCAGCCTCTGCCGGGGAGCGGGCACGGTCCACACTGCAGAAGGAGGTCCATGCTGCCAAGT  
CACTGGCCATCATTGTGGGGCTCTTTGCCCTCTGCTGGCTGCCCTACACATCATCAACTGCTTCACTTT  
CTTCTGCCCGACTGCAGCCACGCCCTCTCTGGCTCATGTACCTGGCCATCGTCTCTCCACACCAAT  
TCGGTTGTGAATCCCTTCTACGCTACCGTATCCGCGAGTTCGCCAGACCTCCGCAAGATCATT  
GCAGCCAGTCTGAGGCAGCAAGAACCTTTCAAGGCAGCTGGCACCAGTGCCCGGGTCTTGGCAGCTCA  
TGGCAGTGACGGAGAGCAGGTACGCTCCGCTCAACGGCCACCCGCCAGGAGTGTGGGCAACGGCAGT  
GCTCCCCACCCTGAGCGGAGGCCAATGGCTACGCCCTGGGGCTGGTGTGAGTGGAGGGAGTGCCAAGAGT  
CCCAGGGGAACACGGGCCTCCCAGAGCTGGAGCTCCTTAGCCATGAGCTCAAGGGAGTGTGCCAGAGCC  
CCCTGGCTAGATGACCCCTGGCCAGGATGGAGCAGGAGTGTCC

**ACGGT**ACGGCGCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG204485 representing NM\_000675  
 Red=Cloning site Green=Tags(s)

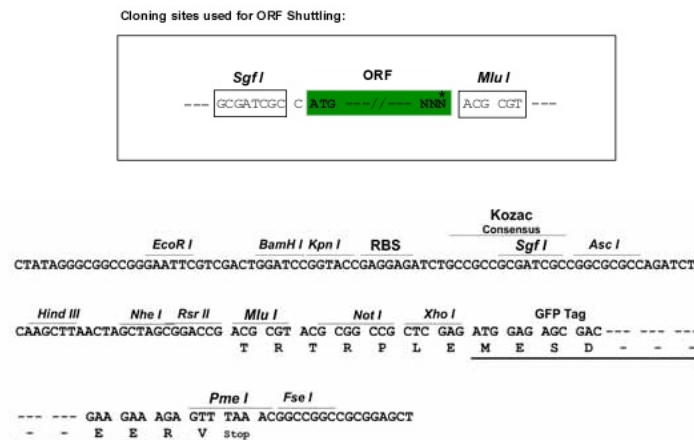
MPIMGSSVYITVELAIAVLAILGNVLCWAVWLNLSNLQNVNTNYFVVSLLAAADIAVGVLAIPFAITISTGF  
 CAACHGCLFIACFVLVLTQSSIFSLLAIAIDRYIAIRIPLRYNGLVTGTRAKGIIAICWVLSFAIGLTPM  
 LGWNNCGQPKEGKNHSQGCGEQVACLFEDEVPMNYMVYFNFFACVLVPLLLMLGVYLRIFLAARRQLKQ  
 MESQPLPGERARSTLQKEVHAAKSLAIIIVGLFALCWLP LHIINCF TFFCPDCSHAPLWLMYLAIVLSHTN  
 SVVNPFIYAYRIREFRQTFRKIIRSHVLRQQEPFKAAGTSARVLA AHGSDGEQVSLRLNGHPPGVWANGS  
 APHPERRPNGYALGLVSGGSAQESQGNTGLPDVELLSHELKGVCPPEPGLDDPLAQDGAGVS

TRTRPLE - GFP Tag - V

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja1893\\_a07.zip](https://cdn.origene.com/chromatograms/ja1893_a07.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000675

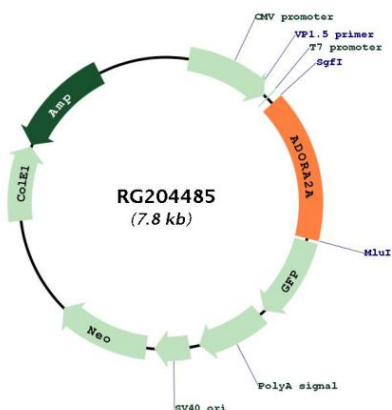
**ORF Size:** 1236 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in *E. coli* are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_000675.3</a> , <a href="#">NP_000666.2</a>
<b>RefSeq Size:</b>	2403 bp
<b>RefSeq ORF:</b>	1239 bp
<b>Locus ID:</b>	135
<b>UniProt ID:</b>	<a href="#">P29274</a>
<b>Cytogenetics:</b>	22q11.23
<b>Domains:</b>	7tm_1
<b>Protein Families:</b>	Druggable Genome, GPCR, Transmembrane
<b>Protein Pathways:</b>	Calcium signaling pathway, Neuroactive ligand-receptor interaction, Vascular smooth muscle contraction
<b>Gene Summary:</b>	<p>This gene encodes a member of the guanine nucleotide-binding protein (G protein)-coupled receptor (GPCR) superfamily, which is subdivided into classes and subtypes. The receptors are seven-pass transmembrane proteins that respond to extracellular cues and activate intracellular signal transduction pathways. This protein, an adenosine receptor of A2A subtype, uses adenosine as the preferred endogenous agonist and preferentially interacts with the G(s) and G(olf) family of G proteins to increase intracellular cAMP levels. It plays an important role in many biological functions, such as cardiac rhythm and circulation, cerebral and renal blood flow, immune function, pain regulation, and sleep. It has been implicated in pathophysiological conditions such as inflammatory diseases and neurodegenerative disorders. Alternative splicing results in multiple transcript variants. A read-through transcript composed of the upstream SPECC1L (sperm antigen with calponin homology and coiled-coil domains 1-like) and ADORA2A (adenosine A2a receptor) gene sequence has been identified, but it is thought to be non-coding. [provided by RefSeq, Jun 2013]</p>

Product images:



Circular map for RG204485